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EXAMINER

MARMOR II, CHARLES ALAN

ART UNIT	PAPER NUMBER
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3736

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/799,334

Applicant(s)

SALVI ET AL.

Examiner

Charles A. Marmor, II

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. This Office Action is responsive to the Amendment filed January 4, 2006. The Examiner acknowledges the amendments to the specification; the amendment to claim 1; and the addition of new claims 2-20. Claims 1-20 are pending.

#### ***Drawings***

2. The drawings were received on January 4, 2006. These drawings are acceptable.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 5, 7 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 5 and 18, the limitation "optical mouse type sensor" renders the claims indefinite. The meets and bounds of the limitation are vague and indefinite as one cannot determine what is encompassed by the term "type."

Regarding claim 7, the limitation "blade shaped" renders the claim indefinite. One cannot be certain of the meets and bounds of this limitation, as blades can have various shapes (e.g. a blade of a sword, a blade of a knife, a blade of grass, a blade of a hockey stick, a blade of an ice skate, and a blade of an oar).

***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 1 recites “an elongated member disposed longitudinally adjacent to the patient’s spine.” Claim 9 recites that “the first sensor is disposed along the patient’s spine at approximately the location of the 1<sup>st</sup> sacral vertebrae.” Claim 10 recites that “the second sensor is disposed along the patient’s spine at approximately the location of the 12<sup>th</sup> thoracic vertebrae.” Claim 15 recites “an elongated member disposed longitudinally along the patient’s spine.” Claim 16 recites that “the first sensor is disposed along the patient’s spine at approximately the location of the 1<sup>st</sup> sacral vertebrae.” Claim 17 recites “an elongated member disposed longitudinally along the patient’s spine.” These claims recite a positive relationship to the human body.. However, the human body is non-statutory subject matter and cannot be positively recited. Therefore, applicant should amend the respective claims to recite that the elongated member is --adapted to be-- disposed in the claimed fashion relative to the body.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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8. Claims 1, 2, 7-12 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Fraser et al. ('625). Fraser et al. teach an apparatus for monitoring posture and the movement of a patient's spine. The apparatus includes a vertical member (11) adapted to be disposed longitudinally adjacent a patient's spine through a pocket (7) in a corset or garment (3) worn by the patient. The elongated member has dimensions that inherently cause it to be relatively flexible in the midsagittal plane and relatively inflexible in the frontal plane. First sensor and second sensors (13) are mounted to the vertical member at opposite ends thereof (see at least Fig. 2). The first sensor is capable of monitoring flexion and extension motion of the patient's spine in the midsagittal plane. The second sensor is capable of monitoring lateral motion of the patient's spine in the frontal plane. The first and second sensors are strain gauges. The sensors are disposed inside of the pocket (7). The elongated member is a blade shaped member having a width in the frontal plane and a thickness in the midsagittal plane, where the width is greater than the thickness. The first sensor is capable of being disposed at approximately the location of the 1<sup>st</sup> sacral vertebrae and the second sensor is capable of being disposed at approximately the location of the 12<sup>th</sup> thoracic vertebrae.

9. Claims 1, 4 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Marras et al. ('819). Marras et al. teach an apparatus for monitoring posture and the movement of a patient's spine. The apparatus includes a vertical member (12) adapted to be disposed longitudinally adjacent a patient's spine. The elongated member has dimensions along elements (14) that inherently cause it to be relatively flexible in the midsagittal plane and relatively inflexible in the frontal plane. First sensor and second sensors (50,52) are mounted to the

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vertical member. The first sensor is capable of monitoring flexion and extension motion of the patient's spine in the midsagittal plane. The second sensor is capable of monitoring lateral motion of the patient's spine in the frontal plane. The sensors are either potentiometers or optical sensors (see column 4, lines 39-42).

10. Claims 17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Curchod ('578). Curchod teaches an apparatus for monitoring posture and the movement of a patient's spine. The apparatus includes a vertical member (120, 210) adapted to be disposed longitudinally adjacent a patient's spine. First sensor and second sensors (combinations of 110, 112, 114, 118, 218 and 202) are mounted to the vertical member. The first sensor is capable of monitoring flexion and extension motion of the patient's spine in the midsagittal plane. The second sensor is capable of monitoring lateral motion of the patient's spine in the frontal plane. The sensors are either potentiometers or optical sensors (see column 4, lines 11-15). In at least one embodiment (see Figure 11B), a computer is in electrical communication with second sensor. The computer includes a display having a cursor which is controlled by the second sensor, such that the position of the cursor on the display is indicative of the lateral movement of the patient's spine.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marras et al. ('819) in view of Curchod ('578). Marras et al. teach all of the limitations of the claim except that the apparatus further comprises a computer in electrical communication with the second sensor, where the computer includes a display having a cursor, and where the second sensor controls movement of the cursor. Curchod teaches an apparatus, as described above, where a computer is in electrical communication with a second, optical sensor, and where the movement of a cursor displayed on the computer is controlled by the second sensor in order to reflect lateral movements of the patient's spine. It would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to form an apparatus similar to that of Marras et al. with a computer having a display including a cursor that is linked to one of the sensors similar to that of Curchod in order to show detected movements of the spine on a display.

***Allowable Subject Matter***

13. Claims 5 and 18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

14. Claims 3, 13 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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15. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 3, no prior art of record teach or fairly suggest an apparatus for monitoring the movement of a patient's spine, as claimed by Applicant, where the elongate member is flexible in the midsagittal plane and substantially inflexible in the frontal plane and where at least one strain gauge mounted on the elongated member monitors flexion and extension motion of the patient's spine in the midsagittal plane and an optical sensor mounted on the elongated member monitors lateral motion of the patient's spine in the frontal plane.

Regarding claims 5 and 18, no prior art of record teach or fairly suggest an apparatus for monitoring the movement of a patient's spine, as claimed by Applicant, where the second sensor is an optical mouse sensor or an optical sensor having the components of an optical mouse.

Regarding claims 13 and 20, no prior art of record teach or fairly suggest an apparatus for monitoring the movement of a patient's spine, as claimed by Applicant, where the second sensor is an optical sensor mounted to the elongated member, where the optical sensor detects movement of a track disposed inside of a pocket in a corset worn by the patient as the patient's spine moves laterally in the frontal plane.

### ***Response to Arguments***

16. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection. Applicant contends that McGorry fails to teach a device that measures flexion and extension motion in the midsagittal plane and lateral motion in the frontal plane, where the elongated member is flexible in the midsagittal plane and substantially inflexible in the frontal plane, where the first sensor includes at least one strain gauge, or where



the second sensor includes an optical sensor. These arguments are moot in view of the new grounds of rejection set forth hereinabove.

***Conclusion***

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles A. Marmor, II whose telephone number is (571) 272-4730. The examiner can normally be reached on M-TH (7:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Charles A. Marmor, II  
Primary Examiner  
Art Unit 3736

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March 31, 2006